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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/577,995 | 05/03/2006 | Stijn Vancompernelle | 016782-0358 | 4929 |

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| EXAMINER |
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FREEMAN, JOHN D

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| ART UNIT | PAPER NUMBER |
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4174

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11/20/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|----------------------------------------------|--|
| Office Action Summary | Application No. 10/577,995 | Applicant(s) VANCOMPERNOLLE ET AL. | |
| | Examiner John Freeman | Art Unit 4174 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 7-9 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 10-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/3/06, 7/26/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I (claims 1-6 and 10-13) in the reply filed on October 24, 2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Drawings

2. The drawings are objected to because the axes of the graphs in **Fig. 1, 2, and 3** are not labeled. As these graphs describe the load cycle curves of the present invention, clear diagrams are necessary. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either

“Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: p20 describes a ‘sixth’ embodiment, but it appears to be Applicant’s fifth embodiment.
- Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-6 and 10-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.
6. Claim 1 and its dependents are directed to a steel cord comprising two strands, each strand comprising two steel filaments, wherein the cord satisfies a load-cycle test described by Applicant. The breaking load of the cord is an important indicator in this

test; it is a benchmark for the structural elongation values. In the specification, the preferred embodiments contrast conventional cords to inventive cords, but provide only the breaking load values Applicant intends (“aim”—e.g. see p17 Table 2) instead of measured values. Since it is unclear whether or not the inventive cords actually satisfy the test, one of ordinary skill in the art cannot reliably use the teaching and be certain to reach the claimed invention. The examiner notes that the description of the fourth embodiment includes a measurement of 929N at which 5 of 6 cords broke (p19). In this embodiment, however, the structural elongation on return of the 20th cycle for the conventional cord (‘CP’) is less than 0.09%, just as claimed by Applicant, making it unclear how the inventive cord surpasses the conventional cord in this respect (Table 5). The other difference between the cords, slope equivalent elongation modulus, could be explained by the longer lay-length of the inventive cord (p10 ln 12).

7. Additionally, even if Applicant remedies the above enablement issue, there remains a scope of enablement issue:

8. Claims 1-6 and 10-13 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a steel cord comprising two strands, each strand comprising two steel filaments, does not reasonably provide enablement for said cord having a structural elongation below 0.09% of breaking load after being subjected to twenty load cycles as described by Applicant. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

Art Unit: 4174

9. Applicant's disclosure implies that the ability of the inventive cord to pass the described load cycle test is due to the twists and other characteristics of the strands. The claimed invention, however, makes no mention of such characteristics. Applicant provides no guidelines to apprise one of ordinary skill in the art of infringement other than trial and error to determine if a given cord passes Applicant's test method. In fact, Applicant discloses that, besides the test, no known structural features can identify the claimed invention:

All the product features as described in the claims 1 through 6 are the consequence of the processing of the cords only. Indeed, the invention cords do not discriminate themselves from the state-of-the-art product in terms of known structural features such as steel composition, coating, filament diameters, strand and cord lay lengths. For example the increase in equivalent elongation modulus as claimed in claim 4 and 5 has nothing to do with a change in lay length of the cord: they are exactly the same between invention cords and state-of-the-art cords. This feature is particularly mentioned, because it is known in the art that increasing the lay-length of the cord increases the modulus.

-Specification, p10 ln 4-13

10. Furthermore, Applicant's use of 'comprising' allows for other elements (e.g. stronger non-steel filaments) that can materially affect the ability of a cord to pass the test. As such, any tests done on other cords comprising two strands, each strand comprising two steel filaments would have unpredictable results.

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 1-6 and 10-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

13. The term "fine" in claims 1-6 and 10-13 is a relative term which renders the claims indefinite. The term "fine" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The specification indicates that a cord is "fine" if the filaments are "relatively thin" compared to tire cord filaments (p4 ln 25). One of ordinary skill would not know how thin a filament must be in order for a cord to be considered fine.

14. Additionally, claim 6 describes the limiting lines as being "0.06% apart", but no indication is made with regard to what this is a percentage of (e.g., percent of breaking load, percent of structural elongation). One of ordinary skill would not be reasonably apprised of the scope of the invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Freeman whose telephone number is 571-270-3469. The examiner can normally be reached on Monday-Friday 7:30-5:00PM EST (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, D. Lawrence Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. Lawrence Tarazano/
Supervisory Patent Examiner, Art Unit 4174

John Freeman
Examiner
Art Unit 4174